

AGENDA ITEM #8

Consideration for Preliminary Adoption of Amendments to 312 IAC 11 Governing Lake Construction Activities Concerning Concrete and Steel Sheet Bulkhead Seawalls Along Manmade Channels on Public Freshwater Lakes; Administrative Cause Number 03-194W

Proposed Rule (December 2, 2003)

Natural Resources Commission

Concrete and Steel Sheet Bulkhead Seawalls along Manmade Channels

Background

Construction of man-made channels on Indiana's public freshwater lakes was at its peak between 1930 and mid 1960's. In the late 1960's and early 1970's, construction of channels declined significantly as a result of federal and state legislation that required these projects be evaluated on their impacts to the environment. Prior to the environmental movement most of these channels were located within wetland areas abutting the lake. These wetland areas were prime targets for development because of their close proximity to the lake. Dredged material from the channel excavation was often used to turn cheap low-lying areas into high priced developable land with easy lake access.

Because these manmade channels were excavated in poor soils, channel side slopes were very unstable and often slumped into the channel. In some locations, channel slumping creates serious water quality problems for lakes by affecting bed stability and water clarity. To combat these negative impacts, rigid bulkhead seawalls were often used to stabilize the channel sides. In an effort to simplify the review of applications for channel projects, the Natural Resources Commission adopted the following guidelines at their September 26, 1968 meeting. The guideline for permit approval for a man-made channel is stated as follows:

- a. minimum width of 100 feet
- b. minimum depth of 10 feet at the center of the channel
- c. depth along each side and the landward end of 3 feet
- d. an approved seawall constructed along each side and the landward end
 1. must be an integral portion of the development
 2. must be constructed at the same time the channel is excavated
- e. channel bottom slope of 3 to 1 or flatter from each side and the landward end until a depth of 10 feet or more is obtained at which point the bottom may be flat
- f. a minimum 20 foot wide maintenance easement free of any permanent buildings and any other obstruction be provided on each side of the channel
- g. all excavated materials be placed landward of the shoreline or hauled away from the waters of the lake

Many channels were constructed before the Commission guidelines were adopted. Although it was the Commission's original intent to line these manmade channels with an approved seawall, the current lake rules do not distinguish between manmade channels and the lake's natural shoreline in the application of the definitions of "areas of special concern" and "significant wetland" to these two distinct areas of a lake. Given the Commission's September 26, 1968 guidelines for manmade channel construction, it is appropriate for the Department to consider some type of rule that allows the use of concrete or steel sheet pile along manmade channels. Although this concept appears reasonable, the Department must proceed cautiously as there are some channels that have been excavated where only one side of the channel has been developed and the other sides consist of large areas of wetland vegetation. In these instances, it is prudent that the Department develop some type of rule language that would protect these undeveloped shorelines, yet provide property owners along the developed side an opportunity to construct a bulkhead seawall if desired. Also, it will be crucial that a clear distinction be made between manmade channel and

shoreline along the main body of the lake. The attached rule language would allow the Department some flexibility in issuing permits for bulkhead seawalls along manmade channels.

Summary

New definitions for “manmade channel,” “natural shoreline,” “toe protection,” and “upland side of a manmade channel” have been added to the rule. Additionally, the definitions for “developed area,” “glacial stone,” and “riprap” have been modified to accommodate the inclusion of these new definitions.

The definition for “significant wetland” has been modified so that an unaltered shoreline for at least two hundred fifty (250) feet is no longer a criteria for classification as a significant wetland. These areas of unaltered shoreline will now be called a “natural shoreline.” This reclassification should be less confusing to administer, since the Department had received numerous complaints from lakefront property owners who did not understand how the Department could call areas of open water, along an unaltered shoreline for at least two hundred fifty (250) feet, a significant wetland.

Also, the section of the definition for “area of special concern” referencing one hundred (100) square feet of contiguous emergent vegetation or rooted vegetation with floating leaves has been changed to six hundred twenty five (625) square feet. This change makes this portion of the lake rule consistent with IC 14-22-9-10 which allows for the chemical, mechanical, or physical control of aquatic vegetation in an area up to six hundred twenty five (625) square feet without a permit.

312 IAC 11-4-2 (new seawalls), 312 IAC 11-4-3 (seawall refacing), and 312 IAC 11-4-4 (underwater beaches) have also been modified to incorporate the new and revised definitions.

Additionally, 312 IAC 11-5-3 (variances) has been added to allow the issuance of a permit, otherwise not authorized under the current rules, when it can be demonstrated that issuance of such a permit would either enhance utilization of the lake by the general public or protect the lake resources from excessive, uncontrolled erosion of the lake’s shoreline.

TITLE 312 IAC NATURAL RESOURCES COMMISSION

Proposed Rule
LSA Document #04-
Draft #3 (December 31, 2003)
DIGEST

Amends 312 IAC 11 governing lake construction activities concerning concrete and steel sheet bulkhead seawalls along manmade channels on public freshwater lakes. Adds language that allows bulkhead seawalls to be constructed along the upland sides of a manmade channel with a permit, defines “natural shoreline,” and redefines an “area of special concern” and “significant wetland.”

312 IAC 11-2-2	312 IAC 11-2-25.2
312 IAC 11-2-7	312 IAC 11-2-25. 5
312 IAC 11-2-11	312 IAC 11-3-3
312 IAC 11-2-11.5	312 IAC 11-4-2
312 IAC 11-2-14.5	312 IAC 11-4-3
312 IAC 11-2-19	312 IAC 11-4-4
312 IAC 11-2-24	312 IAC 11-5-3

SECTION 1. 312 IAC 11-2-2 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-2-2 “Area of special concern” defined
Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23
Affected: IC 14-26-2

Sec. 2. “Area of special concern” means an area that contains at least one (1) of the following characteristics:

- (1) An altered shoreline where bulkhead seawalls are at least two hundred fifty (250) feet apart.
- (2) Bogs, fens, muck flats, sand flats, or marl beaches identified by the division of nature preserves in the Natural Community Classification System.
- (3) More than ~~one hundred (100)~~ **six hundred twenty five (625)** square feet of contiguous emergent vegetation or rooted vegetation with floating leaves.

(Natural Resources Commission; 312 IAC 11-2-2; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2220; filed Jan 23, 2001, 10:05 a.m.: 24 IR 1614)

SECTION 2. 312 IAC 11-2-7 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-2-7 “Developed area” defined
Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23
Affected: IC 14-26-2

Sec. 7. “Developed area” means **the upland side or sides of a manmade channel or** an area **that** does not contain any of the following characteristics:

- (1) An area of special concern.
- (2) A significant wetland.
- (3) A natural shoreline.**

(Natural Resources Commission; 312 IAC 11-2-7; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2220; filed Jan 23, 2001, 10:05 a.m.: 24 IR 1614)

SECTION 3. 312 IAC 11-2-11 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-2-11 “Glacial stone” defined

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 11. “Glacial stone” means a rounded stone that satisfies ~~both~~ **each** of the following:

(1) Was produced by glacial activity.

(2) No individual stone weighs more than one hundred twenty (120) pounds.

(3) At least ninety percent (90%) of the material passes through a twelve (12) inch sieve.

(4) Not more than ten percent (10%) of the material passes through a six (6) inch sieve.

(Natural Resources Commission; 312 IAC 11-2-11; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2221)

SECTION 4. 312 IAC 11-2-11.5 IS ADDED TO READ AS FOLLOWS:

312 IAC 11-2-11.5 “Manmade channel” defined

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 11.5. “Manmade channel” means a watercourse created by mechanical means that connects to the lake at one or more points and by its construction increases the total length of shoreline around the lake. It does not include any areas within the lake cleared by either chemical or mechanical means that do not result in an increase in the total length of shoreline around the lake.

SECTION 5. 312 IAC 11-2-14.5 IS ADDED TO READ AS FOLLOWS:

312 IAC 11-2-14.5 “Natural shoreline” defined

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 14.5. “Natural shoreline” means a continuous section of unaltered shoreline where the distance between lawful permanent structures is at least two hundred fifty (250) feet.

SECTION 6. 312 IAC 11-2-20 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-2-20 “Riprap” defined

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 20. “Riprap” means angular, limestone rock that satisfies each of the following conditions:

(1) No individual piece weighs more than one hundred twenty (120) pounds.

(2) At least ninety percent (90%) of the material passes through a twelve (12) inch sieve.

~~(3) Between twenty percent (20%) and sixty percent (60%) of the material passes through a six (6) inch sieve.~~

~~(4) Not more than ten percent (10%) of the material passes through a one and one half (1½) inch sieve.~~

(3) Not more than ten percent (10%) of the material passes through a six (6) inch sieve.

(Natural Resources Commission; 312 IAC 11-2-20; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2222)

SECTION 7. 312 IAC 11-2-24 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-2-24 “Significant wetland” defined

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 24. “Significant wetland” means a transitional area between terrestrial and deepwater habitats containing at least one (1) of the following:

(1) At least two thousand five hundred (2,500) square feet of contiguous, emergent vegetation or rooted vegetation with floating leaves landward or lakeward of the legally established or average normal waterline or shoreline. The areal extent of the vegetation is independent of ownership.

(2) Adjacent wetland areas designated by a federal or state agency under one (1) of the following:

(A) National Wetlands Inventory.

(B) U.S. Army Corps of Engineers Wetlands Delineation Manual (1987).

(C) National Food Security Act Manual (1994).

(3) The existence of a species listed at 15 IR 1312 in the Roster of Indiana Animals and Plants which are Extirpated, Endangered, Threatened, or Rare.

~~(4) An alteration of the area would result in significant environmental harm.~~

~~(5) Unaltered shoreline for at least two hundred fifty (250) feet.~~

(Natural Resources Commission; 312 IAC 11-2-24; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2222)

SECTION 8. 312 IAC 11-2-25.2 IS ADDED TO READ AS FOLLOWS:

312 IAC 11-2-25.2 “Toe protection” defined

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 25.2. “Toe protection” means the glacial stone or angular, limestone rock that is placed along the lakeward face of a bulkhead seawall to minimize lake bed erosion and undercutting at the base of the seawall and satisfies each of the following:

(1) No individual piece weighs more than one hundred twenty (120) pounds.

(2) At least ninety percent (90%) of the material passes through a twelve (12) inch sieve.

(3) Not more than ten percent (10%) of the material passes through a six (6) inch sieve.

(4) No individual piece is placed more than one (1) foot lakeward of the lakeward face of a bulkhead seawall.

SECTION 9. 312 IAC 11-2-25.5 IS ADDED TO READ AS FOLLOWS:

312 IAC 11-2-25.5 “Upland side of a manmade channel” defined

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 25.5. “Upland side of a manmade channel” means those sections of the shoreline along a manmade channel where less than six hundred twenty five (625) square feet of contiguous emergent vegetation or rooted vegetation with floating leaves are present.

SECTION 10. 312 IAC 11-3-3 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-3-3 Written licenses for structures which do not qualify for a general license

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-11-4; IC 14-26-2

Sec. 3. (a) Except as provided in section 1 of this rule and in subsection (c), a structure placed within the waterline or shoreline of a public freshwater lake requires a written license issued by the department under IC 14-26-2 and this rule.

(b) Except as provided in 312 IAC 11-4-7, a structure that is located on a public freshwater lake more than one hundred fifty (150) feet and less than two hundred (200) feet from the legally established or average normal waterline or shoreline requires a written license under IC 14-26-2, this rule, IC 14-15-7-3, and ~~310 IAC 2-1-4~~ **312 IAC 5-4**. The department may provide that the multiple licensing requirements of this subsection be satisfied with a single written license.

(c) Except as provided in 312 IAC 11-4-7, a structure that is located on a public freshwater lake and not less than two hundred (200) feet from the waterline or shoreline does not require a license under IC 14-26-2 and this rule, but the structure does require a license under IC 14-15-7-3 and ~~310 IAC 2-1-4~~ **312 IAC 5-4**. Only a navigation aid or water recreation structure can be licensed under ~~310 IAC 2-1-4~~ **312 IAC 5-4**.

(d) The director or a delegate shall not issue a license under this rule, except upon a written determination that shows the following:

(1) The license, including conditions attached to the license, conforms with IC 14-26-2 and this rule. In making the determination, there shall be a determination that issuance of the permit would not result in significant environmental harm to the public freshwater lake.

(2) The applicant has demonstrated that an owner of each parcel of real estate, reasonably known to be adjacent to the real estate described in subsection (e)(2), has been notified under IC 14-11-4 and 312 IAC 2-3.

(e) An application for a license under this section must include the following:

(1) A description of the permanent structure, including plans and specifications of sufficient detail for the department to evaluate the project under IC 14-26-2 and this rule.

(2) A description of the real estate on which the structure would be located or which the structure would benefit.

(f) Examples of a structure that requires a written license under this section include the following:

(1) A marina.

(2) A new seawall or a seawall refacing.

(3) An underwater beach.

(4) A boatwell excavation, construction, or fill.

(5) A fish attractor.

(6) A pier that is supported by a structure permanently mounted in, or affixed to, the bed of the lake.

(7) A boathouse that is totally or partially enclosed on the sides. This structure ordinarily should be:

(A) placed over a boat well constructed landward of the legally established or average normal waterline or shoreline; and

(B) constructed only after a permit is obtained to alter the legally established or average normal waterline or shoreline.

(g) The requirements of this rule are in addition to the requirements of 312 IAC 6 for any public freshwater lake that is also a navigable waterway. *(Natural Resources Commission; 312 IAC 11-3-3; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2224)*

SECTION 11. 312 IAC 11-4-2 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-4-2 New seawalls

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 2. (a) A written license under IC 14-26-2 and this rule is required for the construction or placement of a seawall within or along the legally established or average normal waterline or shoreline of a public freshwater lake.

(b) If a new seawall is to be placed in a significant wetland **or along a natural shoreline**, the seawall must be comprised of bioengineered materials.

(c) If a new seawall is to be placed in an area of special concern, the seawall must be comprised of either or both of the following:

- (1) Bioengineered materials.
- (2) Glacial stone.

(d) If a new seawall is to be placed in a developed area, the seawall must be comprised of one (1) or some combination of the following:

- (1) Bioengineered material.
- (2) Glacial stone.
- (3) Riprap.
- (4) Concrete.
- (5) Steel sheet piling.

(e) For a new seawall comprised of glacial stone or riprap, the base of the wall must not extend more than four (4) feet lakeward of the waterline or shoreline.

(f) The lakeward face of the new seawall must be located along the public freshwater lake's legally established or average normal waterline or shoreline as determined by the department.

(g) The lakeward extent of bioengineered material must be coordinated with the department before filing the license application.

(h) The director or a delegate may not issue a license for the placement of an impermeable material behind or beneath a new seawall.

(i) Filter cloth placed behind or beneath a new seawall must be properly anchored to prevent displacement or flotation.

(j) Erosion from disturbed areas landward of the waterline or shoreline must be controlled to prevent its transport into the lake.

(k) Toe protection placed along the lakeward face of a new bulkhead seawall must not extend more than one (1) foot lakeward of the new seawall.

(Natural Resources Commission; 312 IAC 11-4-2; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2225)

SECTION 12. 312 IAC 11-4-3, AS PROPOSED TO BE AMENDED AT 27 IR 1201, SECTION 2, IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-4-3 Seawall refacing

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 3. (a) A written license under IC 14-26-2 and this rule is required to reface on the lakeward side of a seawall that is located within or along the waterline or shoreline of a public freshwater lake.

(b) Except as provided in 312 IAC 11-3-1(e), the director or a delegate shall not issue a license to reface a seawall if the wall has been previously refaced.

(c) To qualify for a license if a seawall is to be refaced in a significant wetland or an area of special concern, the seawall reface must be comprised of ~~either or both of the following~~

~~(1) Bioengineered materials.~~

~~(2) Glacial stone.~~

like materials in accordance with the following seawall types:

(1) For an existing concrete seawall, the seawall reface may be comprised of either concrete, glacial stone, or bioengineered materials, or any combination of the three.

(2) For an existing steel sheet piling seawall, the seawall reface may be comprised of either steel sheet piling, glacial stone, or bioengineered materials, or any combination of the three.

(3) For an existing riprap seawall, the seawall reface may be comprised of either riprap, glacial stone, or bioengineered materials, or any combination of the three.

(4) For an existing glacial stone seawall, the seawall reface may be comprised of either glacial stone or bioengineered materials, or any combination of the two.

(5) For an existing bioengineered seawall, the seawall reface may be comprised of bioengineered materials only.

(6) For all other seawall types, the seawall reface may be comprised of either glacial stone or bioengineered materials, or any combination of the two.

(d) To qualify for a license if a seawall is to be refaced in a developed area, the seawall reface must be comprised of one (1) or some combination of the following:

(1) Bioengineered material.

(2) Glacial stone.

(3) Riprap.

(4) Concrete.

(5) Steel sheet piling.

(e) For a seawall reface comprised of:

(1) glacial stone or riprap, the reface must not extend more than four (4) feet lakeward of the waterline or shoreline at the base of the existing wall;

(2) concrete, the reface must:

(A) not extend more than twelve (12) inches lakeward of the existing seawall; and

(B) be keyed to the lakeward face of the existing seawall;

(3) steel sheet piling, the reface must not extend more than six (6) inches lakeward of the existing seawall; and

(4) bioengineered material, the lakeward extent of the reface must be coordinated with the department before filing the permit application.

(f) Any walk or structural tie constructed on top of the existing seawall must be located landward of the seawall face.

(g) The director or a delegate shall not issue a license for the placement of an impermeable material behind or beneath a seawall reface.

(h) Filter cloth placed behind or beneath the seawall reface must be properly anchored to prevent displacement or flotation.

(i) Erosion from disturbed areas landward of the waterline or shoreline must be controlled to prevent its transport into the lake.

(j) Toe protection placed along the lakeward face of a refaced bulkhead seawall must not extend more than one (1) foot lakeward of the refaced seawall.

(Natural Resources Commission; 312 IAC 11-4-3; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2225; filed Jan 23, 2001, 10:05 a.m.: 24 IR 1616)

SECTION 13. 312 IAC 11-4-4 IS AMENDED TO READ AS FOLLOWS:

312 IAC 11-4-4 Underwater beaches

Authority: IC 14-10-2-4; IC 14-15-7-3

Affected: IC 14-26-2

Sec. 4. (a) A written license under IC 14-26-2 and this rule is required to place material for an underwater beach within a public freshwater lake.

(b) The director or a delegate shall not issue a license for the placement of filter cloth or an impermeable material beneath or in an underwater beach.

(c) The director or a delegate shall not issue a license for the placement of an underwater beach in a significant wetland **or along a natural shoreline**.

(d) To qualify for a license to place an underwater beach in an area of special concern, the underwater beach must:

- (1) not exceed six hundred twenty-five (625) square feet;
- (2) not extend more than thirty (30) feet lakeward of the normal waterline or shoreline or to a depth of six (6) feet, whichever occurs earlier;
- (3) be placed on no more than one-half ($\frac{1}{2}$) the length of the waterline or shoreline of the riparian owner;
- (4) be comprised of clean, nontoxic pea gravel;
- (5) not exceed six (6) inches thick; and
- (6) be thin enough or be tapered so the waterline or shoreline will not be extended lakeward when the public freshwater lake is at its average normal water level.

(e) To qualify for a license to place an underwater beach in a developed area, the underwater beach must:

- (1) be comprised of clean, nontoxic pea gravel;
- (2) not exceed six (6) inches thick;
- (3) be placed on no more than one-half ($\frac{1}{2}$) the length of the waterline or shoreline of the riparian owner;
- (4) extend no more than fifty (50) feet lakeward from the waterline or shoreline or beyond a depth of six (6) feet, whichever occurs earlier; and
- (5) be thin enough or be tapered so the waterline or shoreline will not be extended lakeward when the public freshwater lake is at its normal water level.

(f) If beach material has been placed previously under this section, the additional material must not:

- (1) extend beyond the limits of the previous beach material; and
- (2) exceed the size restrictions specified in subsections (d) and (e).

(g) Erosion from disturbed areas landward of the waterline or shoreline must be controlled to prevent its transport into the lake. *(Natural Resources Commission; 312 IAC 11-4-4; filed Feb 26, 1999, 5:49 p.m.: 22 IR 2226; filed Dec 26, 2001, 2:42 p.m.: 25 IR 1547)*

SECTION 14. 312 IAC 11-5-3 IS ADDED TO READ AS FOLLOWS:

Rule 5. Innovative Practices, Nonconforming Uses, and Variances

312 IAC 11-5-3 Licenses within public freshwater lakes; variances

Authority: IC 14-10-2-4; IC 14-15-7-3; IC 14-26-2-23

Affected: IC 14-26-2

Sec. 3. (a) The director or a delegate may issue a variance to the terms and provisions approved in this article, under either of the following circumstances, if the applicant demonstrates to the satisfaction of the department:

(1) That activities under the permit satisfy both of the following:

(A) The applicant is either a government entity, non-profit organization, lake association, or educational institution that demonstrates the licensed activity would enhance public access or use of the lake.

(B) Do not affect the public safety, natural resources, natural scenic beauty, or water level of the lake in a detrimental manner otherwise prohibited by IC 14-26-2.

(2) The applicant is a private entity that demonstrates based upon a written assessment provided by a registered professional engineer, geologist, or soil scientist, with expertise in bank stabilization and erosion control practices, that the licensed activity is the only viable alternative for controlling erosion and stabilization of the lake's shoreline and does not affect the public safety, natural resources, natural scenic beauty, or water level of the lake in a detrimental manner otherwise prohibited by IC 14-26-2. The written assessment must address and evaluate the following items:

(A) Composition of existing shoreline terrain.

(B) Impacts due to wind and wave action.

(C) Severity of erosion and need for bank stabilization

(D) Suitability of materials to armor and provide bank stabilization

(E) Project's affect on public safety, natural resources, natural scenic beauty, and water level of the lake.

(b) A person who wishes to secure a license under this section must confer and consult with the department before filing an application.

(c) Use of the following materials cannot qualify for a license under this section:

(1) Railroad ties.

(2) Treated timber.

(3) Broken concrete.

(4) Tires.

(5) Scrap metal, appliances, or vehicle bodies.

(6) Asphalt.

(7) Another material not considered by the department to be suitable for satisfying the requirements of subsection (a).